

What is claimed is:

1. A payload track adapted for use with a payload assembly, comprising:

an elongated support having a support surface adapted to engage directly or indirectly
5 with a lower surface of a floor panel, and an engagement surface adapted to be coupled to the
payload assembly, the engagement surface being at least one of flush with and recessed
below the lower surface of the floor panel when the support surface is engaged with the
lower surface.

10 2. The payload track of Claim 1, wherein the engagement surface has at least one
of an engagement slot and an attachment aperture disposed therein.

3. The payload track of Claim 1, wherein the engagement surface has an
engagement slot disposed therein, the engagement slot having a plurality of alternating holes
15 and lands and being adapted to cooperatively engage the attachment assembly.

4. The payload track of Claim 1, wherein the elongated support comprises:

a first channel member having a first upper surface;

a second channel member approximately parallel to and spaced apart from the first
20 channel member, the second channel member having a second upper surface approximately
co-planar with the first upper surface; and

an engagement member coupled between the first and second channel members, the
engagement member including the engagement surface, the first and second upper surfaces
adapted to engage the lower surface of the floor panel.

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5. The payload track of Claim 4, wherein the engagement member comprises a plate and the engagement surface has at least one of an engagement slot and an attachment aperture disposed therein.

5 6. The payload track of Claim 1, wherein the elongated support comprises:
a raised plateau portion centrally disposed between a pair of outwardly-extending flange portions, the raised plateau portion including the engagement surface.

7. The payload track of Claim 1, wherein the elongated support comprises:
10 a raised plateau portion centrally disposed between a pair of outwardly-extending flange portions; and
a plate member extending coupled to the raised plateau portion, the top plate including the engagement surface.

15 8. The payload track of Claim 1, wherein the elongated support comprises a box-beam member.

9. The payload track of Claim 1, wherein the elongated support comprises an "I"-shaped beam member.
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10. The payload track of Claim 1, wherein the engagement surface is co-planar with at least one of the lower surface of the floor panel and the support surface.

11. The payload track of Claim 1, wherein the engagement surface is up to about
25 0.2 inches higher than the support surface.

12. The payload track of Claim 1, wherein the engagement surface is within a range of between about 0.20 inches higher than the support surface and about 0.04 inches lower than the support surface, inclusive.

5 13. A payload assembly, comprising:
a payload member having at least one support member; and
a floor assembly including at least one floor panel and an elongated support having a support surface engaged with a lower surface of the floor panel, the elongated support further having an engagement surface being at least one of flush with and recessed below the lower
10 surface of the floor panel, the engagement surface being coupled to the support member.

14. The payload assembly of Claim 13, wherein the engagement surface has at least one of an engagement slot and an attachment aperture disposed therein.

15 15. The payload assembly of Claim 13, wherein the engagement surface has an engagement slot disposed therein, the engagement slot having a plurality of alternating holes and lands and being adapted to cooperatively engage the attachment assembly.

16. The payload assembly of Claim 13, wherein the elongated support comprises:
20 a first channel member having a first upper surface;
a second channel member approximately parallel to and spaced apart from the first channel member, the second channel member having a second upper surface approximately co-planar with the first upper surface; and
an engagement member coupled between the first and second channel members, the
25 engagement member including the engagement surface, the first and second upper surfaces adapted to engage the lower surface of the floor panel.

17. The payload assembly of Claim 16, wherein the engagement member comprises a plate and the engagement surface has at least one of an engagement slot and an attachment aperture disposed therein.

5 18. The payload assembly of Claim 13, wherein the elongated support comprises:
a raised plateau portion centrally disposed between a pair of outwardly-extending flange portions, the raised plateau portion including the engagement surface.

10 19. The payload assembly of Claim 13, wherein the elongated support comprises:
a raised plateau portion centrally disposed between a pair of outwardly-extending flange portions; and
a plate member extending coupled to the raised plateau portion, the top plate including the engagement surface.

15 20. The payload assembly of Claim 13, wherein the elongated support comprises a box-beam member.

20 21. The payload assembly of Claim 13, wherein the elongated support comprises an "I"-shaped beam member.

22. The payload assembly of Claim 13, wherein the engagement surface is coplanar with at least one of the lower surface of the floor panel and the support surface.

25 23. The payload assembly of Claim 13, wherein the engagement surface is up to about 0.2 inches higher than the support surface.

24. The payload assembly of Claim 13, wherein the engagement surface is within a range of between about 0.20 inches higher than the support surface and about 0.04 inches lower than the support surface, inclusive.

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25. An aircraft, comprising:

a fuselage operatively coupled to an airframe;

a propulsion system operatively coupled to the airframe; and

a floor assembly disposed within and coupled to the fuselage, the floor assembly

10 including at least one floor panel and an elongated support having a support surface engaged with a lower surface of the floor panel, the elongated support further having an engagement surface being at least one of flush with and recessed below the lower surface of the floor panel, the engagement surface being adapted to be operatively coupled to an aircraft component.

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26. The aircraft of Claim 25, further comprising an aircraft component, wherein the aircraft component includes a seat member.

27. The aircraft of Claim 25, further comprising an aircraft component, wherein
20 the aircraft component includes a partition.

28. The aircraft of Claim 25, further comprising an aircraft component, wherein the aircraft component includes at least one of a passenger seat, a galley, a lavatory, a cargo container, a partition, a fireplace, a shelf, a bed, and an article of furniture.

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29. The aircraft of Claim 25, wherein the engagement surface has at least one of an engagement slot and an attachment aperture disposed therein.


25315

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- 16 -

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701 Fifth Avenue, Suite 4800
Seattle, Washington 98104
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30. The aircraft of Claim 25, wherein the engagement surface has an engagement slot disposed therein, the engagement slot having a plurality of alternating holes and lands and being adapted to cooperatively engage the attachment assembly.

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31. The aircraft of Claim 25, wherein the elongated support comprises:

a first channel member having a first upper surface;

a second channel member approximately parallel to and spaced apart from the first channel member, the second channel member having a second upper surface approximately co-planar with the first upper surface; and

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an engagement member coupled between the first and second channel members, the engagement member including the engagement surface, the first and second upper surfaces engaged with the lower surface of the floor panel.

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32. The aircraft of Claim 31, wherein the engagement member comprises a plate and the engagement surface has at least one of an engagement slot and an attachment aperture disposed therein.

33. The aircraft of Claim 25, wherein the elongated support comprises:

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a raised plateau portion centrally disposed between a pair of outwardly-extending flange portions, the raised plateau portion including the engagement surface.

34. The aircraft of Claim 25, wherein the elongated support comprises:

a raised plateau portion centrally disposed between a pair of outwardly-extending

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flange portions; and

a plate member extending coupled to the raised plateau portion, the top plate including the engagement surface.


25315

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- 17 -

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701 Fifth Avenue, Suite 4800
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35. The aircraft of Claim 25, wherein the engagement surface is co-planar with at least one of the lower surface of the floor panel and the support surface.

36. The aircraft of Claim 25, wherein the engagement surface is up to about 0.2 inches higher than the support surface.

37. The aircraft of Claim 25, wherein the engagement surface is within a range of between about 0.20 inches higher than the support surface and about 0.04 inches lower than the support surface, inclusive.

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38. A method of supporting a component, comprising:
providing a component having at least one support member;
providing an elongated support having a support surface and an engagement surface,
15 the engagement surface being at least one of flush with and recessed below the support surface;
engaging a lower surface of a floor panel with the support surface; and
coupling the support member with the engagement surface.

20 39. The method of Claim 38, wherein providing a component having at least one support member includes providing a seat member having at least one support member.

40. The method of Claim 38, wherein providing a component having at least one support member includes providing a partition having at least one support member.

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41. The method of Claim 38, wherein providing a component having at least one support member includes providing at least one of a passenger seat, a galley, a lavatory, a

cargo container, a partition, a fireplace, a shelf, a bed, and an article of furniture having at least one support member.

42. The method of Claim 38, wherein providing an elongated support having a
5 support surface and an engagement surface includes providing an elongated support having an engagement surface, the engagement surface having at least one of an engagement slot and an attachment aperture disposed therein.

43. The method of Claim 38, wherein providing an elongated support having a
10 support surface and an engagement surface includes providing an elongated support having an engagement surface, the engagement slot having a plurality of alternating holes and lands and being adapted to cooperatively engage the attachment assembly.

44. The method of Claim 38, wherein providing an elongated support includes
15 providing an elongated support comprising:

a first channel member having a first upper surface;

a second channel member approximately parallel to and spaced apart from the first channel member, the second channel member having a second upper surface approximately co-planar with the first upper surface; and

20 an engagement member coupled between the first and second channel members, the engagement member including the engagement surface, the first and second upper surfaces adapted to engage the lower surface of the floor panel.

45. The method of Claim 38, wherein providing an elongated support includes
25 providing an elongated support comprising:

a raised plateau portion centrally disposed between a pair of outwardly-extending flange portions, the raised plateau portion including the engagement surface.

46. The method of Claim 38, wherein providing an elongated support includes providing an elongated support comprising:

5 a raised plateau portion centrally disposed between a pair of outwardly-extending flange portions; and

a plate member extending coupled to the raised plateau portion, the top plate including the engagement surface.

47. The method of Claim 38, wherein providing an elongated support includes
10 providing an elongated support having an engagement surface that is co-planar with at least one of the lower surface of the floor panel and the support surface.

48. The method of Claim 38, wherein providing an elongated support includes providing an elongated support having an engagement surface that is up to about 0.2 inches
15 higher than the support surface.

49. The method of Claim 38, wherein providing an elongated support includes providing an elongated support having an engagement surface that is within a range of between about 0.20 inches higher than the support surface and about 0.04 inches lower than
20 the support surface, inclusive.